

# Notice of Allowability

Application No.

09/744,363

Examiner

Karla Moore

Applicant(s)

NAKAHARA ET AL.

Art Unit

1763

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment originally filed 5/5/04.
2. ☒ The allowed claim(s) is/are 1,2,4,5.
3. ☒ The drawings filed on 21 February 2001 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

## DETAILED ACTION

### *Allowable Subject Matter*

1. Claims 1, 2, 4 and 5 are allowed.
2. The following is an examiner's statement of reasons for allowance: The prior art of record fails to teach or fairly suggest an epitaxial growth furnace comprising: a sealed chamber; a pair of wafer holders for holding a pair of semiconductor wafers within said chamber; and means for rotating each of said wafer holders within said chamber, wherein formation of an epitaxial layer on a surface of each of said wafers is effected by supplying under a high temperature condition a source gas to a surface area of each of said wafers; wherein said wafer holders are rotatably supported at the peripheral thereof within said chamber and adapted to arrange said pair of wafers in such a manner that the wafers are disposed in mutually opposing positions with each said surface area adjacent to and parallel with each other so that a reaction chamber is formed between said wafers; wherein said surface areas are subject to epitaxial growth within said reaction chamber; wherein each of said wafer holders comprises: an opening for exposing one of said surface areas of the wafers to said reaction chamber; an opening flange adapted for engagement with a chamfered tapered face of a whole peripheral edge of one of said wafers on a side of said surface area thereof; a plurality of jaws for detachably engaging with an other periphery of one of the wafers on a back surface side of said surface area thereof; a plurality of springs for respectively thrusting said jaws toward a center of said opening; and detachable actuating means for locking each of said jaws in a released position against respective thrust forces from said springs; wherein said jaws, said springs and said detachable actuating means are positioned only on said back surface side of each of said wafers, **and wherein said means for rotating each of said wafer holders comprises: a rotating fin including a plurality of vanes attached onto the outer peripheral of each of said wafer holders; and rotating gas supply means for blowing a fin rotating gas to said vanes to cause said wafers to be rotated about a rotation axis along with each of said wafer holders within said chamber.**
3. Further, no other properly combinable piece of art was found that provided the missing teachings required for a rejection of the pending claims

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karla Moore whose telephone number is 571.272.1440. The examiner can normally be reached on Monday-Friday, 8:30am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Mills can be reached on 571.272.1439. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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15 October 2004



Parviz Hassanzadeh  
Primary Examiner  
Art Unit 1763